



*News from the University of Rochester*

OFFICE OF PUBLIC RELATIONS  
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Washington, D.C., March 15 -- The eye is still the best all-round device for extracting information from the world about us, although perception machines will be built by the year 2000 whose abilities will rival and perhaps exceed what we can do with our eyes.

This is the prediction of Prof. Robert M. Boynton, director of the Center for Visual Science at the University of Rochester. Professor Boynton reviewed the "state of the art" of physiological optics today at the 50th anniversary meeting of the Optical Society of America at the Shoreham Hotel. The meeting continues through Friday.

According to Professor Boynton, visual science cannot be divorced from the science of optics, because the eye is not only the best general photo-detector but also is the final detector in many man-made optical systems.

He noted that several techniques, including high-speed motion picture photography, can record variations in time that the eye cannot even begin to see. "Unlike the eye, these purely physical devices cannot for the most part analyze information about objects at a distance and feed the results to the appropriate response mechanisms," he said. "Usually, they (the results) must be looked at. It is in deriving meaningful perception from the sea of radiant energy in which the eye is located that the visual system particularly excels."

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Machines which can recognize patterns are being developed, Professor Boynton said. "Such research will almost certainly improve our models of visual perception."

Boynton characterized a number of the recent discoveries in visual science as "unexpected." Among them:

-- A considerable amount of information is pre-processed in the retina, so that the message conveyed by the optic nerve fiber is not just related to the amount of light absorbed by receptors feeding into it but to much more complex patterns. "Maybe we should not be so surprised," he said. "The embryologists have long told us that the retina is part of the brain, and it is surely complicated enough in its structure to allow almost any kind of computation to be done on the input at this level."

-- Eye movements are necessary to keep vision from fading away. "If the normal movements of the eyes are prevented -- and the eyes always move in normal vision, even during attempted fixation -- then vision fades away," Boynton said.

-- The eyes never move smoothly in scanning a static environment. "Vision instead consists of a series of fixations that are separated by very rapid eye movements to a new fixed location."

-- "During its developmental phase, especially during the first two months of life, the visual system must be exercised by responding to light; if this is prevented, the system atrophies from disuse and function cannot be recovered."

-- If the nerves which connect one side of an animal's brain to the other are cut, a task subsequently learned with the use of only one eye will not transfer to the other, which regards it as a brand-new challenge.

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Such findings, Boynton said, have depended upon the development of new techniques. "The visual scientist has been quick to seize new methods as they have developed in various disciplines, often because the visual scientist is not only a scientist of vision, but also a scientist within the discipline where the new methodology was developed," he said.

Boynton called for the education of more physicists in the visual field. "Many of the discoveries of tomorrow, and the new methods upon which they will depend, are going to be basically of a physical nature," he said.

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March 14, 1966

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EASTERN PSYCHOLOGICAL ASSOCIATION

Location & Schedule: The forthcoming Annual Meeting of the Eastern Psychological Association is scheduled to begin at noon on Thursday, April 14 and to end at 4 p.m., Saturday, April 16, 1966. All events will be located at the Statler-Hilton Hotel in New York City.

Registration: Registration may be done in advance (until April 4) by writing Dr. James Wilson, Department of Psychology, Queens College, Flushing, N.Y. 11367.

Registration fee is \$2.00 for non-members. Dues-paying EPA members are registered without fee. All events scheduled in the program are available to registrants without further charge. No tickets are required.

Printed Program: The printed program is a 120-page brochure which lists all scheduled events, an Exhibits Directory, and the titles, authors, and abstracts of all papers and symposia.

Copies of the program will be mailed third class from this Office around March 1 to all EPA members. Members requesting additional copies either before or during the convention will be charged \$1.00 per copy. Failure to receive a copy usually means failure to keep this Office informed of a current mailing address. In such case, members are requested to arrange forwarding from their previous location.

For non-members, the regular registration fee includes one copy of the program. Visitors who desire copies in advance of the meeting should write this Office enclosing \$1.00 per copy. Unless fee is enclosed, requests will not be honored.

Hotel Reservation: Specially prepared reservation forms will be sent to all EPA members around March 1. A limited supply of forms will be available for non-members on request sent to this Office. However, non-members may expedite arrangements by writing directly to the hotel, indicating attendance at the EPA convention. The address is as follows:

Statler-Hilton Hotel, 7th Ave. & 33rd St., New York, N.Y. 10001

Placement Service: The convention Placement Office will open at 1 p.m. on Thursday on the Mezzanine Floor of the Statler-Hilton Hotel, and close at 2 p.m. on Saturday. The Placement Service will be available to non-members.

Preregistration of both employers and applicants should be addressed to Miss Bertita Compton, A. P. A., 1200 Seventeenth St., N.W., Washington, D.C. 20036. Registration will also be possible during the Meeting.

There will be no fees for applicants. Employers who use the facilities of the convention office will be charged \$5.00 per job listing. For additional information, write Dr. Rita D'Angelo, Department of Psychology, Hunter College, Bedford Park Boulevard West, Bronx, N.Y. 10468.

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Exhibits: A complete line of exhibits of interest to psychologists will be located in the center of the Mezzanine Floor. Hours are scheduled between noon on Thursday and 2 p.m. on Saturday.

Persons wishing exhibit space (either tables or exhibitor's booths) are urged to contact Dr. Edward I. Gavurin, Department of Psychology, Hunter College, Bedford Park West, Bronx, N.Y. 10468.

Special Meetings: Special business meetings or social events may be arranged through Dr. Virginia Staudt Sexton, Department of Psychology, Hunter College, Bedford Park West, Bronx, N.Y. 10468. After January 15, convention listing cannot be included in the printed program.

Requests for Special Equipment or Services: Slide projectors (3 $\frac{1}{4}$  x 4" slides only), screens, and microphones will be available in regular meeting rooms for use by program participants. Users of tape recorders and movie projectors must make individual arrangements with the Chairman of audio-visual aids, Dr. Laurence Zeitlin, Department of Psychology, Baruch School, 17 Lexington Avenue, New York, N.Y. 10010. Individuals who desire secretarial services or equipment such as typewriters, and duplicators are expected to make their own arrangements.

Mailing List: Requests to be placed on special mailing lists for program materials ordinarily cannot be honored. The only mailing list maintained by the Association is the membership roster.

Members of APA who reside in the East may become a member of EPA immediately by notifying this Office of a mailing address and submitting \$2.00 annual dues. Membership in APA does not automatically make one a member of EPA. The East is defined by the Bylaws as the coastal states, Maine through Virginia, West Virginia, and Eastern Canada through Ontario.

Non-APA psychologists who reside in the East may apply for EPA membership by filling out special forms obtained from this Office. Deadline for filing completed applications is March 1 annually.

The deadline for submitting program proposals for the 1966 meeting was December 1, 1965. Non-members of EPA may present papers at the Annual Meeting, but they must have the written sponsorship of an EPA member. The deadline for abstracts is usually on or about December 1 each year.